

9/9/02

Theme: Key challenges in the green building effort

1. Project overview
 - a. Location, images
 - b. program
2. Site design
 - a. Goal: integrate the building and nature: retain and absorb stormwater
 - i. Outline Atlanta's surface water quality problems
 - ii. Pending local and NPDES regulations
 - b. Challenges
 - i. urban site (constricted)
 - ii. GIT unfamiliar with the principles – used to clipped lawn look
 - iii. Fortunately, had an LA and Civil who understood solutions
 - c. Solution – create a productive landscape – landscape is more than decorative
 - i. Rain gardens (visible to public)
 - ii. Ephemeral pools
 - iii. Cistern supplemented by cooling tower condensate
 - iv. Native plants
3. Energy
 - a. Goal: plot a path to a sustainable energy future
 - i. Optimize use of sun's energy
 - ii. Minimize demand
 - b. Challenges
 - i. Daylighting
 1. site demands east-facing curtainwall
 2. client demanded perimeter offices
 - ii. Process loads - computer lab
 1. potentially heavy internal demands
 2. constantly changing requirements
 - iii. renewable energy
 - iv. Atlanta climate – not conducive to natural ventilation/cooling
 - c. Solutions

- i. Daylighting studies
 - 1. glare control (also use examples from CDC)
 - 2. glazed transom
 - 3. lighting designed to complement daylighting
 - ii. [what have we done about process loads?]
 - iii. renewable energy
 - 1. PVs still not cost effective in GA – but have planned to incorporate PVs at some future date
 - 2. green power only now available – GIT is revising contracting processes
 - iv. analysis shows ventilation via façade in this climate is not energy efficient
 - 1. use economizer cycle for ventilation
 - 2. operable windows independent of ventilation
 - 3. temper spaces, in lieu of cooling
 - v. result is energy savings of ?? – cite DOE-2 study (ready in early Oct)
- 4. LEED certification – pluses and minuses
 - a. GIT wanted a LEED certified building
 - b. We are careful to point out the differences between good gb practice and LEED
 - c. Positive - has held GIT's feet to the fire on several things
 - i. kept the stormwater management design intact
 - ii. changed some standards for entire campus: lighting, plants, materials
 - iii. start to deal with construction waste management
 - d. negative – did some things that don't make sense for this project to get certified
 - i. electric car outlets
 - ii. provided showers, when locker rooms are across the street
 - iii. CO₂ monitoring
 - e. negative – some of our efforts will not earn points because of credit reqs
 - i. consolidated, provided limited parking for several buildings underground
 - f. LEED problems are well-known, and the standard continues to evolve
- 5. conclusions
 - a. model of stormwater management that GIT can use as a teaching tool
 - b. commitment to daylighting, renewables as SOP moving forward
 - c. commitment to seeking LEED certification